



Questions & Answers

Lead in School Drinking Water

Is lead a health concern for children?

Yes, especially for young children and infants. Growing bodies tend to absorb more lead than the average adult. Excess amounts of lead can damage the brain, kidneys, nervous system, and red blood cells. In children, lead also has been associated with impaired mental and physical development, and hearing problems. The harmful effects of lead in the body can be subtle and may occur without any obvious signs of lead poisoning.

Drinking water usually isn't a significant source of lead for children, but it may contribute to total exposure.

Why is lead a concern for schools?

Reducing the amount of lead in drinking water to as close to zero as possible is an important part of reducing a child's overall exposure to lead in the environment. Typical sources of lead exposure include dust and chips from interior and exterior lead-based paint removal, lead-contaminated soil, industrial sources of lead, and lead-containing materials used in parental occupations or hobbies.

The "on-again, off-again" water use patterns of most schools can result in elevated lead levels in drinking water. Water that remains stagnant in plumbing—overnight, during a weekend or vacation—is in contact with lead pipes or lead solder longer, and could contain higher levels of lead.

How does lead get into drinking water?

Lead generally enters drinking water from a building's plumbing system. Lead may be present in various parts of the plumbing system (such as lead solder, brass fixtures, and lead or galvanized pipes) and leach into water standing in the plumbing system. The amount of lead in drinking water, if any, depends on how corrosive the water is and the materials used to construct the plumbing system. The age of the building does not seem to matter. Even new plumbing fixtures can leach lead into drinking water.

The longer water stands in the plumbing system, the more lead it can absorb. Factors such as water chemistry and temperature affect the rate at which water absorbs lead.

Are there other contaminants that can be in school drinking water?

Yes. Copper, cadmium, and other contaminants can leach from plumbing systems into drinking water and may cause health concerns when levels exceed standards. Zinc and iron may also leach from plumbing systems. While these two elements cause no health-related concerns, they may spoil the taste, odor or appearance of water, or cause stains on plumbing fixtures.

Do drinking water rules address lead in schools?

Yes. The Washington State Department of Health Office of Drinking Water (ODW) oversees state and federal drinking water rules.

Schools that own or operate their own water system must comply with the requirements of the federal **Lead and Copper Rule**. ODW requires these systems to sample for lead to minimize the risk of exposure from drinking water.



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER

Most schools get their water from public water systems, and fall under the purview of the federal **Lead Contamination Control Act**. Designed to reduce children's exposure to all sources of lead while at school and day care centers, this law:

- Identifies and bans several water fixtures and water coolers that contain lead.
- Recommends that schools inventory their facilities and remove or replace these devices.
- Recommends that schools test other sites within their facilities to identify other sources of lead.
- Requires schools to notify parents, faculty, and students when testing is underway, and make results available upon request.

How can schools test for lead in drinking water?

Lead testing can be complex, especially the first time. Factors to consider are: How many sites should be tested? What is the proper way to collect samples? Who will collect them? What will we do if lead levels are high?

For help with lead testing, see the following publications:*

- *3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance* (816-B-05-008) – U.S. Environmental Protection Agency, October 2006. EPA developed the 3Ts (Training, Testing, and Telling) to help schools implement simple strategies for managing the health risks of lead in schools and drinking water.
- *Testing for lead in school drinking water systems* (331-261) Washington State Department of Health, October 2006. A brochure with step-by-step instructions on collecting samples in a school building.

How can schools reduce lead levels?

Boiling the water will not remove lead. Activities that may help reduce lead consumption include:

- Advising staff and students to run the water for a few seconds before drinking.
- Removing or replacing fixtures that leach lead.
- Flushing the piping system in the building.
- Providing bottled water.
- Repairing the plumbing system.
- Using only the cold-water tap for drinking, preparing juice or cooking.
- Installing water treatment devices.
- Developing a new source of drinking water.

Does the state provide funds to help cover the cost of repairs?

Not at this time. When schools determine they need plumbing improvements, they should explore funding sources with their district and governing boards. Schools may also benefit by talking to their water utility about the high lead levels and asking if steps are underway to improve water quality.

Where can I get more information?

If you have questions, call Derrick Dennis, Department of Health Office of Drinking Water, at (360) 236-3122 or e-mail derrick.dennis@doh.wa.gov

*Publications referenced in this document are online at
<http://www4.doh.wa.gov/dw/publications/publications.cfm>

Additional resources are online at:

Washington State Department of Ecology http://www.ecy.wa.gov/programs/eap/labs/labs_main.html

U.S. Environmental Protection Agency

<http://water.epa.gov/infrastructure/drinkingwater/schools/guidance.cfm>

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